# MATHEMATICS CROSSWALK
## 2008 MATHEMATICS STANDARD TO 2003 MATHEMATICS STANDARD
## GRADE 4

| MATHEMATICS STANDARD ARTICULATED BY GRADE LEVEL | | | | |
|---|---|---|---|---|
| **Strand 1: Number and Operations** | | | | |
| **CONCEPT** | **2008 PO** | **ITEM DESCRIPTION** | **2003 PO** | **ITEM DESCRIPTION** |
| **1. Number Sense** | 1 | Express whole numbers, fractions, decimals, and percents using and connecting multiple representations. | 1 | Read whole numbers in contextual situations. |
| | | | 4 | State place values for whole numbers (e.g., In the number 203,495 what is the value of the 2?). |
| | | | 5 | Construct models to represent place value concepts for the one's, ten's, hundred's, and thousand's places. |
| | | | 6 | Apply expanded notation to model place value (e.g., 203,495 = 200,000 + 3,000 + 400 + 90 + 5). |
| | | | 10 | Identify symbols, words, or models that represent mixed numbers. |
| | | | M03-S1C2-14 | Apply the symbols: $\times$, $\div$, $/$, $*$, **%**, and the grouping symbols ( ) and ",". **(percent symbol only)** |
| | | | M05-S1C1-01 | Make models that represent improper fractions. |
| | | | M05-S1C1-02 | Identify symbols, words, or models that represent improper fractions. |
| | | | M07-S1C1-01 | Express fraction as terminating or repeating decimals. |
| | 2 | Compose and decompose whole numbers using factors and multiples. | 18 | Identify all whole number factors and pairs of factors for a given whole number through 144. |
| | | | 19 | Determine multiples of a given whole number with products through 144. |
| | | | M03-S1C1-20 | Identify whole-number factors and/or pairs of factors for a given whole number through 24. |
| | | | M03-S1C1-21 | Determine multiples of a given whole number with products through 24 (skip counting). |
| | | | M05-S1C1-09 | Identify all whole number factors and pairs of factors for a number. |

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### GRADE 4

| CONCEPT | 2008 PO | ITEM DESCRIPTION | 2003 PO | ITEM DESCRIPTION |
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**Strand 1: Number and Operations**

| CONCEPT | 2008 PO | ITEM DESCRIPTION | 2003 PO | ITEM DESCRIPTION |
|---|---|---|---|---|
| **1. Number Sense** | 3 | Express fractions as fair sharing, parts of a whole, parts of a set, and locations on a real number line. | 9 | Make models that represent mixed numbers. |
| | | | 10 | Identify symbols, words, or models that represent mixed numbers. |
| | | | 11 | Use mixed numbers in contextual situations. |
| | | | M05-S1C1-03 | Use improper fractions in contextual situations. |
| | 4 | Compare and order decimals to hundredths. | 12 | Compare two unit fractions (e.g., ½ to 1/5) or proper or mixed numbers with like denominators. |
| | | | 13 | Order three or more unit fractions or proper or improper fractions with like denominators. |
| | | | 15 | Compare two decimals. |
| | | | 16 | Order three or more decimals. |
| | | | 17 | Determine the equivalency among decimals, fractions, and percents (e.g., 49/100 = 0.49 = 49%). |
| | | | M02-S1C1-19 | Compare two decimals using money, through hundredths, using models, illustrations, or symbols. |
| | | | M03-S1C1-17 | Compare two decimals, through hundredths, using models, illustrations, or symbols. |
| | | | M03-S1C1-18 | Order three or more decimals, through hundredths, using models, illustrations, or symbols. |
| | 5 | Use simple ratios to describe problems in context. | M06-S1C1-01 | Express fractions as ratios, comparing two whole numbers (e.g., ¾ is equivalent to 3:4 and 3 to 4). |
| | M03-S1C1-01 | **Moved to Grade 3** | 2 | Identify whole numbers in or out of order. |
| | | | 3 | Write whole numbers in or out of order. |
| | M03-S1C1-02 | **Moved to Grade 3** | 7 | Compare two whole numbers. |
| | | | 8 | Order three or more whole numbers. |
| | M04-S1C2-01 | **Moved to Strand 1 Concept 2** | 14 | Use decimals in contextual situations. |

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| Strand 1: Number and Operations | | | | |
|---|---|---|---|---|
| **CONCEPT** | **2008 PO** | **ITEM DESCRIPTION** | **2003 PO** | **ITEM DESCRIPTION** |
| **2. Numerical Operations** | 1 | Add and subtract decimals through hundredths including money to $1000.00 and fractions with like denominators. | 12 | Add or subtract fractions with like denominators, no regrouping. |
| | | | M01-S1C2-14 | Demonstrate addition of fractions with like denominators (halves) using models. |
| | | | M01-S1C2-15 | Demonstrate subtraction of fractions with like denominators (halves) using models. |
| | | | M02-S1C2-15 | Demonstrate addition of fractions with like denominators (halves and fourths) using models. |
| | | | M02-S1C2-16 | Demonstrate subtraction of fractions with like denominators (halves and fourths) using models. |
| | | | M03-S1C1-16 | Use decimals through hundredths in contextual situations. |
| | | | M03-S1C2-16 | Add or subtract fractions with like denominators (halves, thirds, fourths, eighths, and tenths) appropriate to grade level. |
| | | | M03-S1C2-17 | Apply addition and subtraction in contextual situations, through $20.00. |
| | | | M04-S1C1-14 | Use decimals in contextual situations. |
| | 2 | Use multiple strategies to multiply whole numbers<br>• two-digit by two-digit and<br>• multi-digit by one-digit. | 5 | Multiply multi-digit numbers by two-digit numbers. |
| | 3 | Demonstrate fluency of multiplication and division facts through 12. | 6 | Divide with one-digit divisors. |
| | | | 7 | State multiplication and division facts through 12s. |
| | 4 | Use multiple strategies to divide whole numbers. | 6 | Divide with one-digit divisors. |

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| CONCEPT | 2008 PO | ITEM DESCRIPTION | 2003 PO | ITEM DESCRIPTION |
|---|---|---|---|---|
| **Strand 1: Number and Operations** | | | | |
| **2. Numerical Operations** | 5 | Apply associative and distributive properties to solve multiplication and division problems. | 8 | Demonstrate the associative property of multiplication. |
| | | | 9 | Apply grade-level appropriate properties to assist in computation. |
| | 6 | Apply order of operations with whole numbers. | 13 | Simplify numerical expressions using the order of operations with grade-appropriate operations on number sets. |
| | | | M03-S1C2-14 | Apply the symbols: ×, ÷, /, ∗, %, and the grouping symbols ( ) and ",". **(all symbols except % and",")** |
| | M03-S1C2-01 | **Moved to Grade 3** | 1 | Add whole numbers. |
| | | | 2 | Subtract whole numbers. |
| | | **REMOVED (This skill is required throughout the standard).** | 3 | Select the grade-level appropriate operation to solve word problems. |
| | | | 4 | Solve word problems using grade-level appropriate operations and numbers. |
| | M02-S3C3-02 | **Moved to Grade 2 (greater than and less than symbols)** | 10 | Apply the symbol: • and ( ) for multiplication, and ≤, ≥. |
| | M05-S1C2-04 | **Moved to Grade 5 (raised dot and parentheses)** | | |
| | | **REMOVED (This skill is required throughout the standard).** | 11 | Use grade-level appropriate mathematical terminology. |
| **3. Estimation** | 1 | Use benchmarks as meaningful points of comparison for whole numbers, decimals, and fractions. | 3 | Estimate length and weight using both U.S. customary and metric units. |
| | | | 4 | Estimate and measure for distance. |
| | 2 | Make estimates appropriate to a given situation or computation with whole numbers and fractions. | 1 | Solve grade-level appropriate problems using estimation. |
| | | | 2 | Use estimation to verify the reasonableness of a calculation (e.g., Is 3284 x 343 = 1200 reasonable?). |
| | | | 3 | Estimate length and weight using both U.S. customary and metric units. |
| | | | 4 | Estimate and measure for distance. |

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# MATHEMATICS CROSSWALK
## 2008 MATHEMATICS STANDARD TO 2003 MATHEMATICS STANDARD
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| CONCEPT | 2008 PO | ITEM DESCRIPTION | 2003 PO | ITEM DESCRIPTION |
|---|---|---|---|---|
| **1. Data Analysis (Statistics)** | 1 | Collect, record, organize, and display data using double bar graphs, single line graphs, or circle graphs. | 2 | Construct a single-bar graph, line graph or two-set Venn diagram with appropriate labels and title from organized data. |
| | 2 | Formulate and answer questions by interpreting and analyzing displays of data, including double bar graphs, single line graphs, or circle graphs. | 3 | Interpret graphical representations and data displays including single-bar graphs, circle graphs, two-set Venn diagrams, and line graphs that display continuous data. |
| | | | 4 | Answer questions based on graphical representations and data displays including single-bar graphs, circle graphs, two-set Venn diagrams, and line graphs that display continuous data. |
| | | | 6 | Formulate predictions from a given set of data. |
| | | | 7 | Solve contextual problems using graphs, charts, and tables. |
| | 3 | Use median, mode, and range to describe the distribution of a given data set. | 5 | Identify the mode(s) of given data. |
| | 4 | Compare two sets of related data. | M05-S2C1-07 | Compare two sets of data related to the same investigation. |
| | | **REMOVED** | 1 | Formulate questions to collect data in contextual situations. |
| | M07-S2C3-02 | **Moved to Grade 7 (two-set Venn Diagram only)** | 2 | Construct a single-bar graph, line graph or two-set Venn diagram with appropriate labels and title from organized data. (**two-set Venn Diagram only**) |
| | | | 3 | Interpret graphical representations and data displays including single-bar graphs, circle graphs, two-set Venn diagrams, and line graphs that display continuous data. (**two-set Venn Diagram only**) |
| | | | 4 | Answer questions based on graphical representations and data displays including single-bar graphs, circle graphs, two-set Venn diagrams, and line graphs that display continuous data. (**two-set Venn Diagram only**) |

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# MATHEMATICS CROSSWALK
## 2008 MATHEMATICS STANDARD TO 2003 MATHEMATICS STANDARD
## GRADE 4

| Strand 2: Data Analysis, Probability, and Discrete Mathematics | | | | |
|---|---|---|---|---|
| CONCEPT | 2008 PO | ITEM DESCRIPTION | 2003 PO | ITEM DESCRIPTION |
| **2. Probability** | 1 | Describe elements of theoretical probability by listing or drawing all possible outcomes of a given event and predicting the outcome using word and number benchmarks. | 1 | Name the possible outcomes for a probability experiment. |
| | | | 2 | Describe the probability of events as being more likely, less likely, equally likely, unlikely, certain, impossible, fair or unfair. |
| | | | M02-S2C2-01 | Name the possible outcomes for a probability experiment. |
| | | | M02-S2C2-02 | Predict the most likely or least likely outcome in probability experiments (e.g., Predict the chance of spinning one of the 2 colors on a 2-colored spinner.). |
| | | | M03-S2C2-01 | Name the possible outcomes for a probability experiment. |
| | | | M03-S2C2-02 | Make predictions about the probability of events being more likely, less likely, equally likely or unlikely. |
| | | | M05-S2C2-02 | Describe the probability of events as being: <br> • certain (represented by "1"), <br> • impossible, (represented by "0"), or <br> • neither certain nor impossible (represented by a fraction less than 1). |
| | M05-S2C2-02 | **Moved to Grade 5** | 3 | Predict the outcome of a grade-level appropriate probability experiment. |
| | | | 4 | Record the data from performing a grade-level appropriate probability experiment. |
| | | | 5 | Compare the outcome of an experiment to predictions made prior to performing the experiment. |
| | | | 6 | Make predictions from the results of student-generated experiments using objects (e.g., coins, spinners, number cubes). |
| | | | 7 | Compare the results of two repetitions of the same grade-level appropriate probability experiment. |

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| Strand 2: Data Analysis, Probability, and Discrete Mathematics | | | | |
|---|---|---|---|---|
| **CONCEPT** | **2008 PO** | **ITEM DESCRIPTION** | **2003 PO** | **ITEM DESCRIPTION** |
| **3. Systematic Listing and Counting** | 1 | Construct tree diagrams to solve problems in context by<br>• representing all possibilities for a variety of counting problems,<br>• explaining how its properties relate to the problem,<br>• representing the same counting problem in multiple ways, and<br>• drawing conclusions. | 1 | Find all possible combinations when one item is selected from each of two sets containing up to three objects (e.g., How many outfits can be made with 3 pants and 2 tee shirts?). |
| | 2 | *Justify that all possibilities have been enumerated without duplication.* | | |
| **4. Vertex-Edge Graphs** | 1 | *Demonstrate the connection between map coloring and vertex coloring.* | | |
| | 2 | Construct vertex-edge graphs to represent concrete situations and identify paths and circuits. | M06-S2C4-01 | Find the shortest route on a map from one site to another (vertex-edge graph). |
| | 3 | *Solve conflict problems by constructing and coloring vertex-edge graphs.* | | |
| | M03-S2C4-01 | **Moved to Grade 3** | 1 | Color maps with the least number of colors so that no common edges share the same color (increased complexity throughout grade levels). |

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| Strand 3: Patterns, Algebra, and Functions | | | | |
|---|---|---|---|---|
| **CONCEPT** | **2008 PO** | **ITEM DESCRIPTION** | **2003 PO** | **ITEM DESCRIPTION** |
| **1. Patterns** | 1 | Recognize, describe, create, extend, and find missing terms in a numerical sequence involving whole numbers using all four basic operations. | 1 | Communicate a grade-level appropriate iterative pattern, using symbols or numbers. |
| | | | 2 | Extend a grade-level appropriate iterative pattern. |
| | | | 3 | Create grade-level appropriate iterative patterns. |
| | 2 | Explain the rule for a given numerical sequence, verify that the rule works, and use the rule to make predictions. | 1 | Communicate a grade-level appropriate iterative pattern, using symbols or numbers. |
| **2. Functions and Relationships** | M02-S3C2-01 | **Moved to Grade 2** | 1 | Describe the rule used in a simple grade-level appropriate function (e.g., T-chart, input/output model). |
| | | **No performance objectives at this grade level.** | | |
| **3. Algebraic Representations** | 1 | Use a symbol to represent an unknown quantity in a simple algebraic expression involving all operations. | 2 | Use variables in contextual situations. |
| | 2 | Create and solve one-step equations that can be solved using addition, subtraction, multiplication, and division of whole numbers. | 1 | Evaluate expressions involving the four basic operations by substituting given whole numbers for the variable. |
| | | | 2 | Use variables in contextual situations. |
| | | | 3 | Solve one-step equations with one variable represented by a letter or symbol using multiplication of whole numbers (e.g., 12 = $n$ x 4). |
| | | | M06-S3C3-05 | Solve one-step equations with one variable represented by a letter or symbol, using inverse operations with whole numbers. |

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| | | **Strand 3: Patterns, Algebra, and Functions** | | |
|---|---|---|---|---|
| **CONCEPT** | **2008 PO** | **ITEM DESCRIPTION** | **2003 PO** | **ITEM DESCRIPTION** |
| **4. Analysis of Change** | 1 | Identify the change in a quantity over time and make simple predictions. | 1 | Identify the change in a variable over time (e.g., an object gets taller, colder, heavier). |
| | | | 2 | Make simple predictions based on a variable (e.g., increase homework time as you progress through the grades). |
| | | | M01-S3C4-01 | Identify the change in a variable over time (e.g., an object gets taller, colder, heavier, etc.). |
| | | | M01-S3C4-02 | Make simple predictions based on a variable (e.g., select next stage of plant growth). |
| | | | M02-S3C4-01 | Identify the change in a variable over time (e.g., an object gets taller, colder, heavier). |
| | | | M02-S3C4-02 | Make simple predictions based on a variable (e.g., a child's height from year to year). |
| | | | M03-S3C4-01 | Identify the change in a variable over time (e.g., an object gets taller, colder, heavier). |
| | | | M03-S3C4-02 | Make simple predictions based on a variable (e.g., increases in allowance as you get older). |

| | | **Strand 4: Geometry and Measurement** | | |
|---|---|---|---|---|
| **CONCEPT** | **2008 PO** | **ITEM DESCRIPTION** | **2003 PO** | **ITEM DESCRIPTION** |
| **1. Geometric Properties** | 1 | Draw and describe the relationships between points, lines, line segments, rays, and angles including parallelism and perpendicularity. | 3 | Draw points, lines, line segments (open or closed endpoints), rays, or angles. |
| | | | M05-S4C1-05 | Draw points, lines, line segments, rays, and angles with appropriate labels. |
| | 2 | *Justify which objects in a collection match a given geometric description.* | | |
| | 3 | Describe and classify triangles by angles and sides. | 5 | Classify triangles as right, acute, or obtuse. |
| | | | M05-S4C1-07 | Classify triangles as scalene, isosceles, or equilateral. |

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| Strand 4: Geometry and Measurement | | | | |
|---|---|---|---|---|
| **CONCEPT** | **2008 PO** | **ITEM DESCRIPTION** | **2003 PO** | **ITEM DESCRIPTION** |
| **1. Geometric Properties** | 4 | *Recognize which attributes (such as shape or area) change and which do not change when 2-dimensional figures are cut up or rearranged.* | | |
| | 5 | Recognize and draw congruent figures, and match them in a given collection. | 6 | Identify congruent geometric shapes. |
| | | | M02-S4C1-02 | Recognize congruent shapes. |
| | 6 | Draw right, acute, obtuse, and straight angles and identify these angles in other geometric figures. | 4 | Classify angles (e.g., right, acute, obtuse, straight). |
| | 7 | Recognize the relationship between a 3-dimensional figure and its corresponding net(s). | M07-S4C1-03 | Identify the net (2-dimensional representation) that corresponds to a rectangular prism, cone, or cylinder. |
| | | | M08-S4C1-03 | Recognize the 3-dimensional figure represented by a net. |
| | M02-S4C1-01 | **Moved to Grade 2** | 1 | Identify the properties of 2-dimensional figures using appropriate terminology. |
| | M03-S4C1-03 | **Moved to Grade 3** | 2 | Identify models or illustrations of prisms, pyramids, cones, cylinders, and spheres. |
| | M03-S4C1-02 | **Moved to Grade 3** | 7 | Identify similar shapes. |
| | | **REMOVED** | 8 | Draw a 2-dimensional shape that has line symmetry. |
| **2. Transformation of Shapes** | M03-S4C2-01 | **Moved to Grade 3** | 1 | Demonstrate translation using geometric figures. |
| | M08-S4C2-02 | **Moved to Grade 8** | 2 | Identify a tessellation. |
| | | **No performance objectives at this grade level.** | | |

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# MATHEMATICS CROSSWALK
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## GRADE 4

<table>
<tr><td colspan="6" align="center"><strong>Strand 4: Geometry and Measurement</strong></td></tr>
<tr><th>CONCEPT</th><th>2008 PO</th><th>ITEM DESCRIPTION</th><th>2003 PO</th><th>ITEM DESCRIPTION</th></tr>
<tr><td rowspan="3"><strong>3. Coordinate Geometry</strong></td><td>1</td><td rowspan="3">Name, locate, and graph points in the first quadrant of the coordinate plane using ordered pairs.</td><td>1</td><td>Name the coordinates of a point plotted in the first quadrant.</td></tr>
<tr><td>M03-S4C3-01</td><td>Identify points in the first quadrant of a grid using ordered pairs.</td></tr>
<tr><td>M05-S4C3-01</td><td>Graph points in the first quadrant on a grid using ordered pairs.</td></tr>
<tr><td></td><td>2</td><td>*Plot line segments in the first quadrant of the coordinate plane using a set of ordered pairs in a table.*</td><td></td><td></td></tr>
<tr><td></td><td>3</td><td>*Construct geometric figures with vertices at points on the coordinate plane.*</td><td></td><td></td></tr>
<tr><td><strong>4. Measurement</strong></td><td>1</td><td>Compute elapsed time to the minute.</td><td>2</td><td>Compute elapsed time using a clock (e.g., hours and minutes since or until…) or a calendar (e.g., days, weeks, years since or until…).</td></tr>
<tr><td rowspan="5"></td><td rowspan="5">2</td><td rowspan="5">Apply measurement skills to measure length, mass, and capacity using metric units.</td><td>1</td><td>Identify the appropriate measure of accuracy for the area of an object (e.g., sq. feet or sq. miles).</td></tr>
<tr><td>3</td><td>Select an appropriate tool to use in a particular measurement situation.</td></tr>
<tr><td>4</td><td>Approximate measurements to the appropriate degree of accuracy.</td></tr>
<tr><td>5</td><td>Compare units of measure to determine <em>more</em> or <em>less</em> relationships including:<br>• length - yards and miles, meters and kilometers, and<br>• weight - pounds and tons, grams and kilograms.</td></tr>
<tr><td>7</td><td>Compare the weight of two objects using both U.S. customary or metric units.</td></tr>
</table>

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| | | **Strand 4: Geometry and Measurement** | | |
|---|---|---|---|---|
| **CONCEPT** | **2008 PO** | **ITEM DESCRIPTION** | **2003 PO** | **ITEM DESCRIPTION** |
| **4. Measurement** | 3 | Solve problems involving conversions within the same measurement system. | 6 | State equivalent relationships (e.g., 3 teaspoons = 1 tablespoon, 16 cups = 1 gallon, 2000 pounds = 1 ton). |
| | | | M05-S4C4-03 | Determine relationships including volume (e.g., pints and quarts, milliliters and liters). |
| | | | M05-S4C4-04 | Convert measurement units to equivalent units within a given system (U.S. customary and metric) (e.g., 12 inches = 1 foot; 10 decimeters = 1 meter). |
| | 4 | Solve problems involving perimeter of 2-dimensional figures and area of rectangles. | 8 | Determine the perimeter of simple polygons (e.g., square, rectangle, triangle). |
| | | | 9 | Determine the area of squares and rectangles. |
| | | | 10 | Differentiate between perimeter and area of quadrilaterals. |
| | 5 | Describe the change in perimeter or area when one attribute (length or width) of a rectangle changes. | M05-S4C4-08 | Describe the change in perimeter or area when one attribute (length, width) of a rectangle is altered. |
| | M03-S4C4-01 | **Moved to Grade 3** | 2 | Compute elapsed time using a clock (e.g., hours and minutes since or until…) or a calendar (e.g., days, weeks, years since or until…). |
| | M03-S4C4-02 | **Moved to Grade 3 (US Customary units only)** | 5 | Compare units of measure to determine *more* or *less* relationships including:<br>• length - yards and miles, meters and kilometers, and<br>• weight - pounds and tons, grams and kilograms.<br>**(US Customary units only: yards and miles and pounds and tons)** |

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| CONCEPT | 2008 PO | ITEM DESCRIPTION | 2003 PO | ITEM DESCRIPTION |
|---|---|---|---|---|
| **Strand 5: Structure and Logic** | | | | |
| **1. Algorithms and Algorithmic Thinking** | 1 | *Analyze common algorithms for computing (adding, subtracting, multiplying, and dividing) with whole numbers using the associative, commutative, and distributive properties.* | | |
| | M04-S5C2-02 | **Moved to Strand 5 Concept 2** | 1 | Discriminate necessary information from unnecessary information in a given grade-level appropriate word problem. |
| | M05-S5C1-02 | **Moved to Grade 5** | 2 | Develop an algorithm to calculate the perimeter of simple polygons. |
| **2. Logic, Reasoning, Problem Solving, and Proof** | 1 | *Analyze a problem situation to determine the question(s) to be answered.* | | |
| | 2 | Identify relevant, missing, and extraneous information related to the solution to a problem. | M04-S5C1-01 | Discriminate necessary information from unnecessary information in a given grade-level appropriate word problem. |
| | 3 | *Select and use one or more strategies to efficiently solve the problem and justify the selection.* | | |
| | 4 | *Determine whether a problem to be solved is similar to previously solved problems, and identify possible strategies for solving the problem.* | | |
| | 5 | *Represent a problem situation using any combination of words, numbers, pictures, physical objects, or symbols.* | | |

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| Strand 5: Structure and Logic | | | | |
|---|---|---|---|---|
| **CONCEPT** | **2008 PO** | **ITEM DESCRIPTION** | **2003 PO** | **ITEM DESCRIPTION** |
| **2. Logic, Reasoning, Problem Solving, and Proof** | 6 | *Summarize mathematical information, explain reasoning, and draw conclusions.* | | |
| | 7 | *Analyze and evaluate whether a solution is reasonable, is mathematically correct, and answers the question.* | | |
| | 8 | *Make and test conjectures based on data (or information) collected from explorations and experiments.* | | |
| | M07-S5C2-07 | **Moved to Grade 7** | 1 | Draw a conclusion from a Venn diagram. |
| | M05-S5C2-09 | **Moved to Grade 5** | 2 | Identify simple valid arguments using *if…then* statements based on graphic organizers (e.g., 2-set Venn diagrams and pictures). |

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